



Pacific Institute
for Climate Solutions
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PICS News Scan – 25 October 2011

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The PICS News Scan is a weekly summary of the major climate-change related science, technology, and policy advances of direct relevance to the BC provincial and the Canadian federal governments and more generally to businesses and civil society. The News Scan focuses on cutting edge climate issues and solutions gathered by the fellows and faculty of [ISIS, a research centre at the Sauder School of Business](#), in partnership with the [Pacific Institute for Climate Solutions \(PICS\)](#). Access to some referenced articles may require a journal subscription or purchase of the article, and appropriate links are provided for this purpose. To be added to the News Scan distribution list or to provide content feedback and/or suggestions about interesting news items, please email picsscan@uvic.ca.

Complementing the News Scan is the [PICS Briefing Note Service](#). This service provides timely and concise analysis, as well as suggested policy action, on issues related broadly to BC climate change mitigation and adaptation.

Research Theme I: The low carbon emissions economy

California to proceed with cap and trade

October 21, 2011. On Thursday, the California Air Resources Board (ARB) took the final step towards implementing the second largest cap and trade system by unanimously approving the final draft of the plan. While the start date has been delayed by one year to 2013, this final stage in the implementation of Bill AB32 represents a major landmark in North American climate policy. ARB chair Mary Nichols linked the decision to broader concerns in the US about foreign security issues commenting that “For over half a century, every American president has been calling for America to move away from our dependence on foreign oil and become energy independent. The reason we did not succeed in addressing our addiction to petroleum is because we did not have the right set of policy tools. Now we do.”

The action in California – the seventh largest economy in the world– marks another step forward in the slowly growing international effort to mitigate carbon emissions. Other large economies are moving in the same general direction: China has made commitments to establish strong climate policies in its latest five-year plan, and Australia recently signaled a strong commitment to climate policy by passing carbon tax legislation to take effect in 2012.



Within Canada, Quebec is now moving most rapidly towards implementing a system that will allow the province to participate in the broader Western Climate Initiative (WCI). With the Liberals maintaining control of Ontario in the most recent election, and the NDP holding significant influence there, it appears that province will also stay the course. BC Premier Christy Clark originally affirmed her commitment to climate policy in BC and to work with WCI partners, although the government has been silent on this issue since then. Currently, BC is undergoing a detailed economic analysis to understand the effects on sectors covered by cap and trade. This will help inform a decision on whether or not to proceed on California's path; current market signals suggest that compliance costs will be lower under cap and trade than under the current carbon tax regime. These recent announcements by WCI partners should encourage the province to move forward with the final enabling legislation required to ensure BC participates in cap and trade. However, BC needs to clarify and assert its role as a leader among the major trading partners around the Pacific Rim or risks losing a first mover advantage and being left behind. Delay with or withdrawal from the WCI leaves the province at risk of being subject to penalties, as B.C.-produced goods and energy services cross borders.

<http://www.arb.ca.gov>

US study suggests pricing carbon from ground to consumer

October 18, 2011. A new study suggests that taxing fossil fuels at the source rather than the point of use is more equitable and efficient. The authors of the study, published in the [Proceedings of the National Academy of Sciences](#), argue that there are fewer fossil fuel producers than consumers (simplifying implementation) and that the additional cost would be passed down and absorbed through the supply chain. The result would be more economically efficient than tracking all combustion sources and would avoid fears over industry relocation in response to regulating combustion emissions. Furthermore, fossil fuel exporting countries would be able to keep the carbon revenue in their home states rather than see it collected in the user countries. The at-source carbon pricing mechanism would need to be agreed on between China, the United States, Russia, Canada, Australia, India, Norway and 13 Middle-Eastern states, which collectively extract 67% of global fossil carbon.

The authors of this study have previously described the problem of [international carbon leakage](#), which is a major issue for resource-rich BC. The Sierra Club is among the NGOs [drawing attention to the fact that BC's exported emissions](#), embodied in coal and natural gas, are substantially larger than emissions within the province. While the province already imposes a tax on combustion emissions, the approach proposed in this study would replace it with a tax on extraction recorded as general revenue. With the Pacific Rim heavily represented in the authors' top list of fossil fuel exporting countries, BC could lead the discussion in the region on this interesting new policy.

<http://uk.reuters.com/article/2011/10/17/us-climate-carbon-idUKTRE79G5UN20111017>

Best practices to bring low-carbon solutions to market

October 17, 2011. The Pew Center on Global Climate Change has released a new report that explores how leading businesses are pursuing low-carbon innovations in such key industries as transportation, power generation, and building energy use, among others. The report entitled [The Business of Innovating: Bringing Low-Carbon Solutions to Market](#) identifies seven best

practices that companies are using and documents the unique challenges associated with low-carbon innovation. Designed to offer a set of practical lessons for companies engaged in low-carbon innovation, the report features four in-depth case studies: Alstom SA, Daimler AG, Hewlett-Packard Company, and Johnson Controls, Inc.

The release of this report is timely, as there is some uncertainty about climate and energy policies in BC. What makes the report interesting is the set of practical lessons provided for companies that are pursuing low-carbon innovations, including:

- A commitment to low-carbon innovation as being essential to a company's long-term business strategy: commitment starts at the top and requires strong internal leaders to articulate the value of low-carbon innovations to the company's future growth.
- Involvement of public policy expertise at the highest level of corporate strategy: companies formally incorporate policy insights into strategic decisions. They also proactively engage with policy-makers to shape policies and standards that are supportive of low-carbon innovation.
- A focus on maximizing customer value along with carbon reduction: in order for low-carbon innovations to be successful, they must provide additional value for customers. Companies must often find innovative ways to reduce the risks associated with adopting new technologies.

<http://www.businesswire.com/news/home/20111017005188/en/Pew-Center-Releases-Low-Carbon-Business-Innovation-Report>

Research Theme II: Sustainable communities

Climate-driven migration challenge underestimated

October 19, 2011. A [report](#) from the UK government-backed [Foresight Program](#) says the challenges of migration due to climate change will be greater than previously estimated. Earlier reports assumed mass migration away from affected areas – the UN estimates an average of 25 million people a year have been displaced due to weather-related events since 2008. This new study also looks at the millions who will migrate into vulnerable areas, and those who will be trapped and unable to move to safer locations. The Foresight Program estimates there will be between 154 and 179 million people living in rural coastal floodplains by 2060, unable to move away due to poverty. The report recognizes that policies to restrict or prevent migration are risky, but that the cost of doing nothing will be higher than the cost of the measures needed to tackle migration challenges.

The crisis of climate refugees has policy implications in Canada. A 2010 parliamentary report entitled [Climate Change and Forced Migration: Canada's Role](#) outlines Canada's position with regards to climate refugees. The report acknowledges the growing challenges of mass migration and the need to increase the number of refugees admitted to Canada each year. It also points out that climate refugees are different than traditional refugees. The report states that "For climate migrants, repatriation may be a good option because, unlike traditional refugees, climate migrants technically still enjoy the protection of their own governments. Therefore, the issue is perhaps less about refugees than it is about expanding foreign aid to help developing countries adapt to climate change."

<http://www.reuters.com/article/2011/10/19/us-climate-migration-idUSTRE79I89720111019>

Research Theme III: Resilient ecosystems

US rivers and streams saturated with carbon

October 19, 2011. The findings of a [new study](#) published in the journal *Nature Geoscience* could change the way scientists model carbon changes on land, in water and in the atmosphere. The study says rivers and streams in the United States are releasing substantially more carbon dioxide (CO₂) than previously thought. This is because of the significant amount of carbon leaking into streams and rivers, which is then released into the atmosphere before reaching coastal waterways. According to the authors of the study, this release is equal to burning about 200 billion litres of gasoline. The new research should enable more accurate modelling of the carbon cycle at the regional and global level.

While this study is specific to the US, given the significance of the results it should be used as a model of study for Canadian researchers to determine the most accurate carbon budget possible. If decision-making and policy are based on underestimates of atmospheric CO₂, long-term climate strategy will fail to adequately address the problem. BC's climate action strategies depend on accurate carbon modelling and this report is food-for-thought about the accuracy of our current results.

<http://www.sciencedaily.com/releases/2011/10/111019183007.htm>

El Niño and climate change in the coming century

October 17, 2011. El Niño events happen approximately every four to 12 years and are marked by widespread warming of Pacific Ocean surface waters off the coast of South America. A modelling [study recently published in the *Journal of Science*](#) suggests that while the frequency of El Niño events may not increase over the next century, it is likely that the impacts of such events will worsen. Floods and droughts are often seen during El Niño years, impacting communities and costing billions of dollars in losses and damage. [Previous El Niño events have coincided with the warmest years on record, in 2005 and 1998](#), and it is expected that the combination of future El Niños and climate change will exacerbate the temperature and drought/flood events.

In BC, the last major El Niño event in 2005 saw warmer temperatures throughout much of the province and [previous El Niños have been attributed to a number of effects across Canada](#). [Warmer El Niño years also impact salmon runs off the coast of BC](#), altering migration routes. Broad areas of warming such as those associated with El Niño events are correlated with drought and [forest die-offs in areas of the Amazon](#), while in BC warmer winters in both El Niño and non-El Niño years have increased survivability of the mountain pine beetle impacting forests that were previously seen to be global carbon sinks but are no longer net absorbers of carbon.

<https://www2.ucar.edu/staffnotes/research/5566/el-nino-climate-change-coming-century>

Research Theme IV: Social mobilization

UNESCO, UNEP release guidebook on climate change

October 17, 2011. Information for youth looking to make more sustainable life choices is now available through a [recently released guidebook](#), launched as part of the [YouthXChange initiative](#). The initiative, supported by UNESCO and UNEP, aims to showcase ways in which youth can choose sustainable options, such as shopping for sustainable cosmetics, looking for eco-friendly homes, and greener transportation options. The guidebook also covers social issues, including labour concerns, social justice, and diversity, all with a focus towards a sustainable and just society. The guidebook and messaging is youth friendly and also recommended for educators or organizations working with youth.

In BC, there are a number of programs aimed at educating children and youth about climate change issues and how they can change their behavior to make a positive impact in their lives. The [Climate Change Showdown, run by the BC Sustainable Energy Association](#), is a program aimed at school-aged children using a board game to educate them about positive and negative effects of their actions on the environment. [Check Your Head, a Vancouver-based youth global action network](#), is another initiative that raises awareness both in and outside of schools about environmental and social justice issues. [Thousands of youth gathered in Vancouver last week as part of the We Day 2011](#), listening to notable speakers including Al Gore and Mikhail Gorbachev discussing the important role that youth play in achieving a sustainable future.

<http://climate-l.iisd.org/news/unesco-unep-release-youth-guidebook-on-climate-change/>



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